DOCUMENT RESUME

ED 296 877 SE 049 403

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TITLE Interaction in a Rural Science Class. A Naturalistic Study.
PUB DATE 88
NOTE 49p.; Paper presented at the Annual Meeting of the American Educational Research Association (New Orleans, LA, April 5-9, 1988).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Classroom Communication; Classroom Research; Educational Research; Ethnography; Interaction; *Interpersonal Communication; Junior High Schools; *Naturalistic Observation; *Participant Observation; Qualitative Research; Questioning Techniques; Rural Education; Science Education; *Secondary School Science; Student Reaction; *Teacher Student Relationship

ABSTRACT

The positivist paradigm has dominated the shape and direction of research in education. Traditionally the scientific method is adhered to, variables are strictly controlled, statistics are compiled, and conclusions are reached. In the post-positivist paradigm, studies conducted using naturalistic inquiry take place in the natural setting and do not attempt to control variables. This paper investigated: (1) the effect of a researcher upon a class; and (2) the types of interactions which occur in a classroom. This research was conducted in a seventh grade science class. Participant observation, interviews, and written work were the methods employed to collect data. Member checks were done at various points during data collection and analysis. Triangulation was accomplished through the use of participant observation, interviews, and the written work of students. There was concurrence between the results of each method. Results showed that the introduction of a researcher into a normal classroom does affect the students' reactions. They are more subdued and reticient. By the third visit, most of the students were acting more normal and included the researcher in conversations and discussions. Results also showed classroom interactions constantly occurring between students, students and teacher, and teacher and students. (RT)

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Interaction in a Rural Science Class

A Naturalistic Study

by
Jessica P. Scott

Presented at the annual meeting
of the American Educational Research Association
in New Orleans, Louisiana
April 7, 1988

SE 049 403

Abstract

This is a qualitative research paper dealing with (1) the effect of a researcher upon a class and how long before the researcher becomes an "accepted" member of the group(treated no differently than the regular adult(s) normally found in the classroom), and (2) the types of interactions which occur in a classroom.

This research was conducted in a 7th grade science class in a rural school. Participant observation, interviews (audiotaping both observations and interviews), and written work consisting of open ended questions concerning the students' relationships with their peers and teachers were the methods employed to collect data. Member checks were done at various points during data collection and analysis. Triangulation was accomplished through the use of participant observation, interviews, and the written work of students. There was concurrence between the results of each method.

Results showed that the introduction of a researcher into a normal classroom does affect the students' reactions. They are more subdued and reticient at first. By the third visit, most of the students were acting more normal and included the researcher in conversations and discussions. Results also showed classroom interactions constantly occurring between students, students and teacher, and teacher and students.

Introduction

The positivist paradigm has, until recently, dominated the shape and direction of research in the area of education. Traditionally the scientific method is adhered to, variables are strictly controlled, statistic are compiled, and conclusions are reached. New teaching methods may be conceived but often do not fulfill their promises. In the newer, post-positivist, paradigm, there is no need to be so exacting. Studies conducted using the new method (called ethnography or naturalistic inquiry) take place in the natural setting, like the classroom. The research does not try to control variables or change anything which normally occurs. The reports differ in that they have thick descriptions and give the reader a feeling of being in the situation. In other words, they provide a vicarious experience. The philosophies underlying this paradigm are totally different. For one thing there is the idea of multiple realities rather than a single reality, and simultaneous multiple shaping rather than linear causality.

This paper was an exercise in carrying out a

naturalistic study--using the various methods of participant observation, of conducting interviews, and of keeping field notes--to collect data and develop grounded theory. I concentrated on interactions; the type of interactions that occur in the classroom, and especially the effect a participant observer has on a class.

Interactions in Classrooms

This study deals with interactions in a rural science class. Several studies have been conducted in recent years dealing with interactions. Most of these studies concentrate on interactions among preschoolers or on interactions between exceptional students and mainstreamed students.

Johannessen and Kahn conducted a qualitative study in an effort to determine whether teachers see a need for interactions in the classroom; what methods are used to encourage interactions; how much interaction occurs in high school English classes; and what factors or methods encourage or discourage interaction. The researchers observed teachers in the same classes for several consecutive days, audiotaped these observations and conducted interviews prior to and subsequent to the

period of observation. During interviews, the teachers involved in the study agreed that there was a definite need for interactions both between students and between teachers and students. These teachers also agreed that the major methods used to encourage student interaction were appropriate questioning techniques, student presentations and/or small student-led group discussions. In the large group discussions, a comparison of student "talk" to teacher "talk" ranged from a low ratio of 16% to 63% to a high ratio of 80% to 8%. Teachers in the high group got more student participation than those in the low groups. Researchers found several factors which attribute to more student interaction.

(1) The use of individual student presentations and student-led small group discussions produced more student interaction in whole class discussions which followed the small group activities.

(2) The questioning techniques of the teachers were an important factor. Some asked short answer questions only, while others asked open-ended questions and allowed several students

to elaborate.

(3) The way the literature was introduced, by lecturing or by activities involving the students, was found to be a major factor.

(4) The final factor was in the way the teachers' objectives were written. The teachers with fewer interactions wrote, "The teacher shall...," while those who had more student interactions wrote objectives which started, "The student shall..." The attitude and actions of the teachers are most important in encouraging students to interact.

While Johannessen and Kahn conducted a study dealing with interactions in high school English classes, O'Bryan-Garland and Swinton (1982) did a study in which they identified competencies they felt prospective teachers should possess. They developed a course to examine basic communication theories and to apply identified skills to teaching strategies. One group of pre-service teachers took the new course while another two groups did not. Results of the study showed that those who took the course were able to communicate and interact better with students, parents, and other teachers. A

similar study was conducted later by Chismar (1985). His purpose was to study interactions in selected college classrooms, not to develop a course to teach communication theories. Both sets of reseachers found that knowing how to use communication skills in different situations can be the difference between a successful class and one which is not successful.

Some studies do not limit the population being researched. Some include materials from both public schools and colleges and are expected to not only help those in the classroom identify skills, but to also aid administrators to differentiate between teachers. The Assessment of Classroom Interaction Dynamics (ACID) was developed in 1984 by D. E. Alvermann and others, after the National Assessment of Educational Progress (1981) stated, "while students learn to read a wide range of materials, they develop very few skills for examining the nature of the ideas they take away from their reading." Alvermann felt that this was linked to teacher-student interactions which fostered recitations in class, not discussions. She decided that teachers needed to develop an

awareness of how they structured a discussion. A qualitative study which described all interactive patterns in the classroom was undertaken, lasting a year and a half. The result was the Assessment of Classroom Interaction Dynamics which was intended for use by supervisory personnel as well as for self assessment. This instrument does help teachers become aware of how they structure a discussion, but it was not reliable in its predicted goal of differentiating between teachers by supervisors.

A different type of research, a meta-analysis on interactions, was conducted by R. T. Johnson and D. W. Johnson (1986). They reported on results obtained from over 600 different studies of classroom interactions. They noted the interactions involved in group work versus those of individual work. They concluded that having students work together is a much more powerful tool than having students work alone, whether competitively or individually.

The last article concerns a study conducted by D. L. Rogers and D. D. Ross (1986). The purpose of the study was to try to get children who were

either disruptive or isolated, to enter positive interactive situations with other children. The teachers encouraged these interactions. Rogers and Ross, in the role of participant observers, watched the methods used by the teachers and reported the results. Over a period of six months, they discovered that various techniques had to be used (a technique that worked the previous week, might or might mot work on the same student this week). Another result of positive interactions was that some of the disruptive students became better behaved and some of the isolates were able to make friends. What I found of most help was the description of social isolates and aggressive children.

There has been much research done on interactions in the classroom. These selected studies are among the most recent and most of the research was conducted by use of naturalistic inquiry. What do researchers say about interactions? Where do they take place? What determines their success? The works which have been referred to deal primarily with the interactions between students and with the

interactions between teachers and students. A few deal with what can be done by a teacher to produce more favorable types of interactions in the regular classroom. The main idea behind these articles is that communication and methods of communicating with the students determine whether successful discussions and interactions between students, between students and teachers, and between teachers and administration take place. Communication is the key to interactions.

Method

Site selection

The school chosen for the study was selected for convenience (grades K-12 are housed in the same facility, yet different sections). Because the researcher is a member of the high school faculty, the middle school was chosen as the site for observation. It was felt that the middle school teachers would feel less threatened by the presence of the researcher with a familiar face, but not from their faculty. After obtaining cooperation from the middle school administration, a science teacher who was helpful by giving the researcher rolls and lesson topics and willing to allow

observations in her classroom, was selected. She also told the researcher that the students could be interviewed during the class period. The class chosen met from 12:00 to 1:00 p.m., immediately after a short recess. There were 31 students in the class, but only 30 desks.

Data collection techniques

The observer conducting the study had received instructions in both theory and methods of naturalistic research at Louisiana State University in Baton Rouge. The methods used in collection of data were participant observation with audiotaping to augment notes, interviews with students, conversations with teachers, and open-ended questionnaires dealing with interactions completed by the students. The raw data consisted of observation notes, interview transcripts and summaries, and the written works by the students. Member checks were done at the end of each interview and each observation. Although it was not necessary for triangulation, the teacher confirmed the results obtained from the students when she was allowed to read them.

Setting

This study took place in a modern consolidated K-12 school built to accomodate 1800 to 2000 students. The school population draws from two small towns (Stonewall and Massacre), three villages (Charlotte, Smith, and Norfolk), and two named communities (McMurtray and Styx).

Stonewall is the smaller of the two population centers in East Happiness Parish. It is located on Highway 10 between Eli and St. Petersville . The larger one, Eli, is a separate school district. Within and surrounding Stonewall are several state institutions: East Virginiana State Hospital (mental illness), Virginiana State Forensic Facility (where people incompetent to start trial are kept), Villa Happiness (a geriatric hospital), Virginiana State Veteran's Home, and Dixie Correctional Institute (a medium security prison). Employment in the area is largely based upon these state facilities, with the majority of the jobs being low paying ones. These facilities provide no tax base for support of the school. The racial mix in Stonewall is about 70% white and 30% black.

The rest of the communities (except for Styx)

were founded as railroad refueling and water stops. They are located five miles apart in a line with the railroad (see figure 1). The southernmost, Massacre, was a little more important, and many of the railroad workers lived there. Now it is considered a "bedroom community" for Dusquesne. A small amount of light industry is there, employing less than 100 people. The town of Massacre is 100% white. Its elementary school feeds the Stonewall School Complex at the 7th grade level.

Charlotte, another whistle stop, is located five miles north of Massacre. It is composed of one store, complete with service station. It is a farming area with one or two large farms and about fifteen houses in the area. The people who do not farm, or are not unemployed, commute to Eli, Stonewall, or Dusquesne.

McMurtray, an unincorporated community, was also formerly a whistle stop, but the population center has moved two miles west along Highway 10. It is a 100% black community. There is high unemployment here. Those who are employed either work in the state facilities or in Dusquesne.

Smith is a small village also located on the

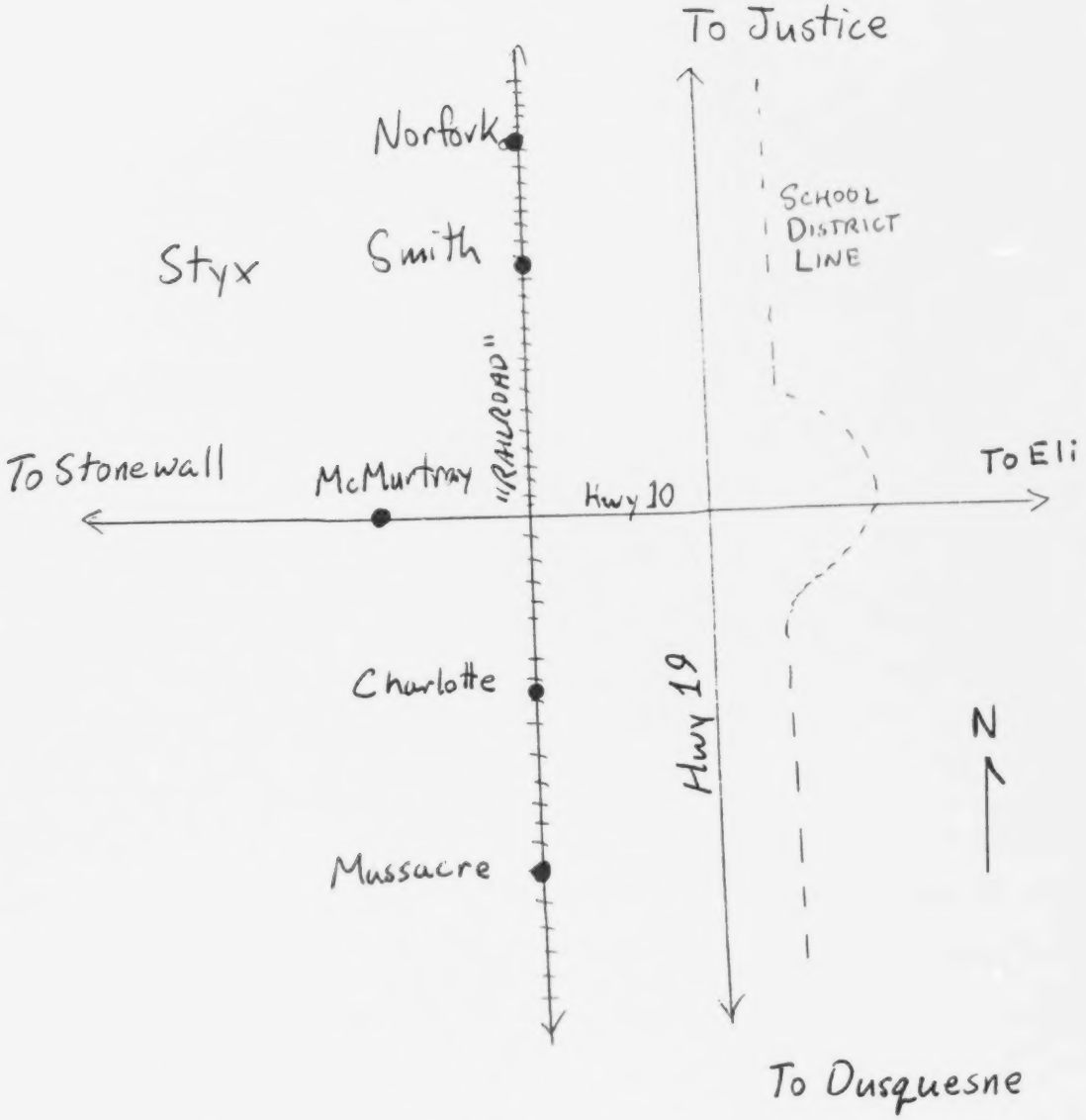
To Justice
Norfork
Smith
Styx
SCHOOL DISTRICT LINE
"RAILROAD"
To Stonewall
McMurtray
Hwy 10
To Eli
Charlotte
Hwy 19
N
Massacre
To Dusquesne

Figure 1

railroad. The population is majority black and have elected a black mayor (unusual for this area of the country). The area is completely rural with a few large farms. Others work at the state institutions in Stonewall or commute to Dusquesne. Again, there is high unemployment.

Five miles north is the last of the whistle stop communities. Norfolk is a majority white village. There are a few antebellum homes with the attendant large farms. There is a small manufacturing firm which employs 25 people. Everyone else works in Stonewall, Dusquesne, or is unemployed.

There is one other community which the school serves. Styx is located on Highway 68 north of Stonewall. The population is 100% black. There is no industry and no employment. This is a welfare community.

As one approaches the school, s/he sees it nestled at the bottom of a hill. It is an impressive looking two story modern brick and glass construction with orange and brown panels on the front. There are rounded bay stairwells on the sides and back. From the parking lot it becomes

obvious that there is more glass on the front of the building than on the sides.

The parking lot is on the top of the hill. To get to the main entrance, one has to descend three short flights of seven steps each, cross a sidewalk, and go under a covered area. The lobby is spacious (see figure 2a). The floor is tile. The design is several red squares surrounded by black. The rest of the floor is white. To the right is the gymnasium which is used by the high school and middle school. There are two sets of doors into the gymnasium with a large glass trophy case filled with trophies and ceramic figures of Indian chiefs. The "chiefs" are the school's mascots.

To the left is the office of the receptionist which leads into the office of the building principal. Also to the left is the concession stand and the bathrooms which service the gym. The high school office is ahead and next to a pair of double doors which lead to the cafeteria. From the lobby, one has to go into the cafeteria to go to either the elementary office or the middle school office.

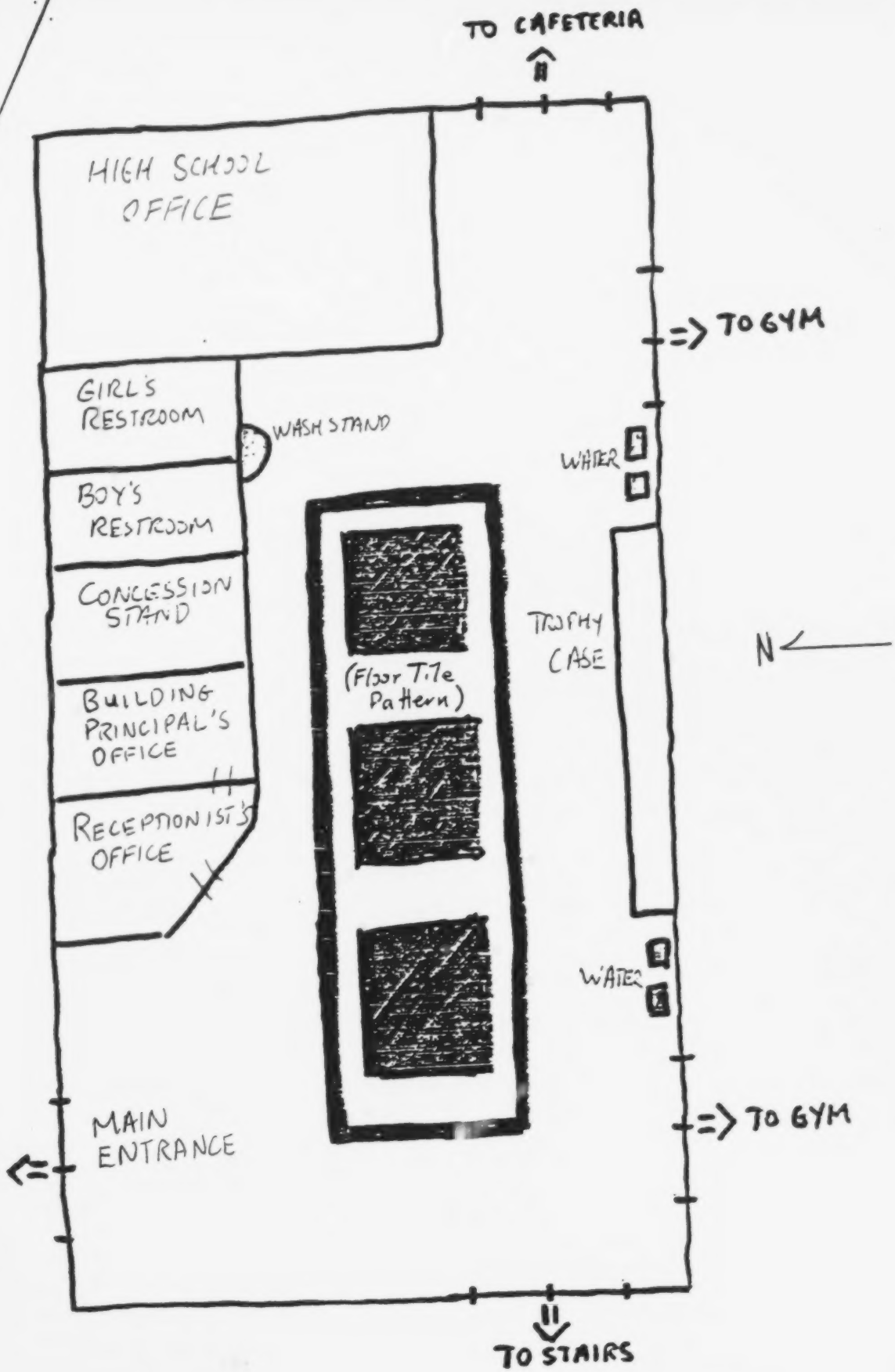
TO CAFETERIA
HIGH SCHOOL OFFICE
=> TO GYM
GIRL'S RESTROOM
WASH STAND
WATER
BOY'S RESTROOM
CONCESSION STAND
TROPHY CASE
N
BUILDING PRINCIPAL'S OFFICE
(Floor Tile Pattern)
RECEPTIONIST'S OFFICE
WATER
MAIN ENTRANCE
=> TO GYM
TO STAIRS

FIGURE 2a

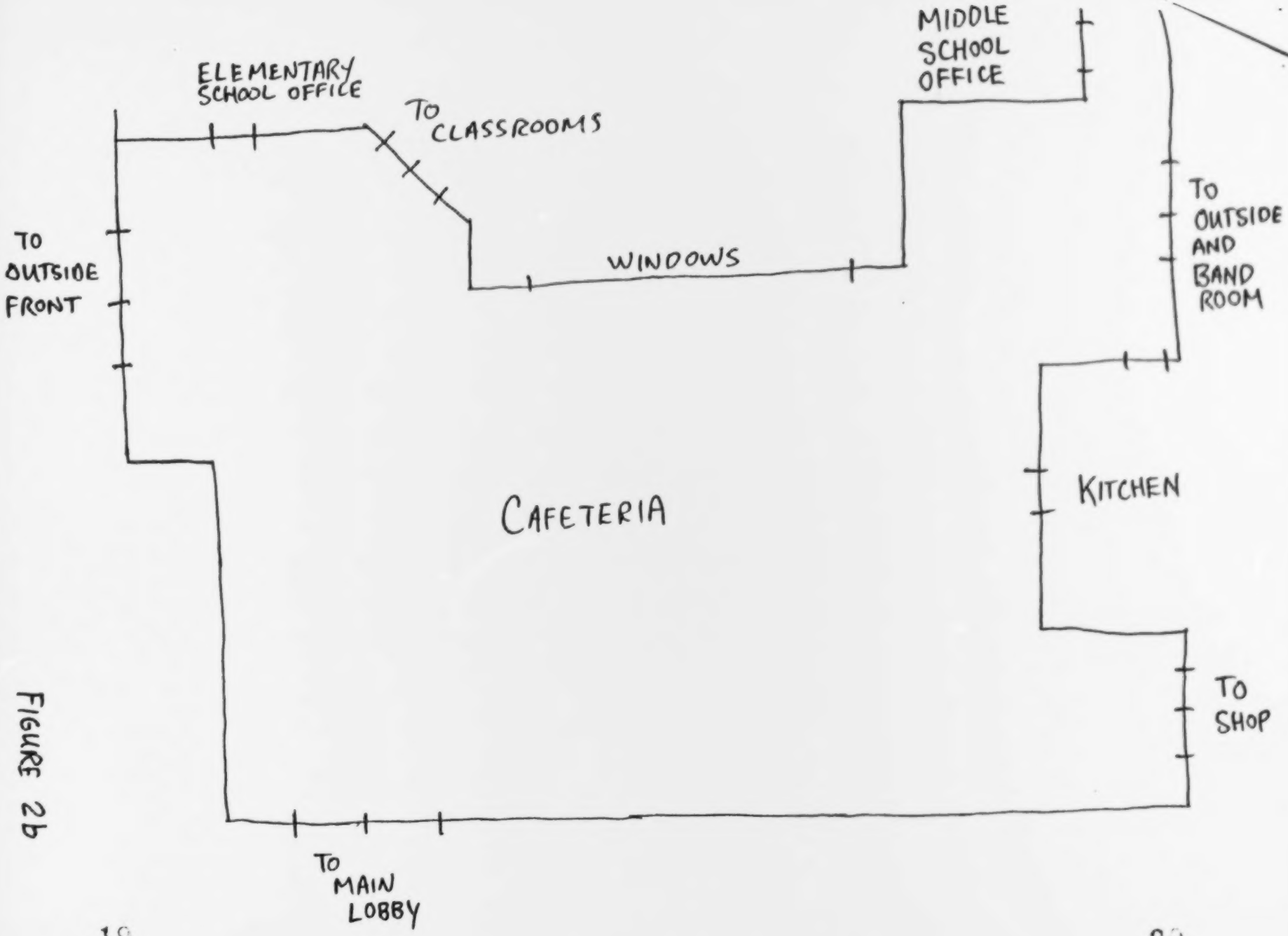
ELEMENTARY SCHOOL OFFICE
TO CLASSROOMS
MIDDLE SCHOOL OFFICE
TO OUTSIDE AND BAND ROOM
TO OUTSIDE FRONT
WINDOWS
KITCHEN
CAFETERIA
TO SHOP
TO MAIN LOBBY

FIGURE 2b

The school has been built so that the three areas are separated from each other. The cafeteria is used by all the grades, K-12 (see figure 2b). Elementary school, K-4, is located in the front east end of the building. Middle school, grades 5-8, is located in the back eastern section while the high school is located on the western side of the building. Classrooms surround the gymnasium on the second floor. Each section is separated by a large set of double doors. The carpets for each section are color coded. Elementary is blue and ocher, middle school is green and ocher, and high school is red and ocher. This is especially helpful in direction someone who is unfamiliar with the extent of the various areas.

The middle school has a recess just before their 4th period which begins at 12:00. Because of this, the researcher was able to enter the classroom before the students came in. This enabled the researcher to look at the room and observe the physical environs without interruptions.

The carpet in the room is an ocher tweed. The walls are dark cream color. As one walks into the

room, the blackboard is immediately to the right (see figure 3). On the wall to the left is the bulletin board. The bulletin board display is about Famous People in Science. It consists of some pictures that were xeroxed and some that had been hand drawn. There is a paragraph about the contribution of each scientist. On this wall are also some student drawn posters of the cell. The class rules are posted as was the grading scale. Both of these are on large poster size red paper shaped like a scroll.

On the back wall is a large tree. The trunk and leaf sections are cut from brown and green paper. There were two butterflies (about the size of plates) on each side of the tree. These appear to be made of different colors of tissue paper. At the base of the tree are large tissue flowers. There are two flocks of birds between the butterflies and the branches of the tree. The birds have the name of some of the students on them. These birds represent students who had 3.5 averages in science. The larger birds represent boys and the smaller birds represent girls.

The wall opposite the door has bookcases,

THE CLASSROOM

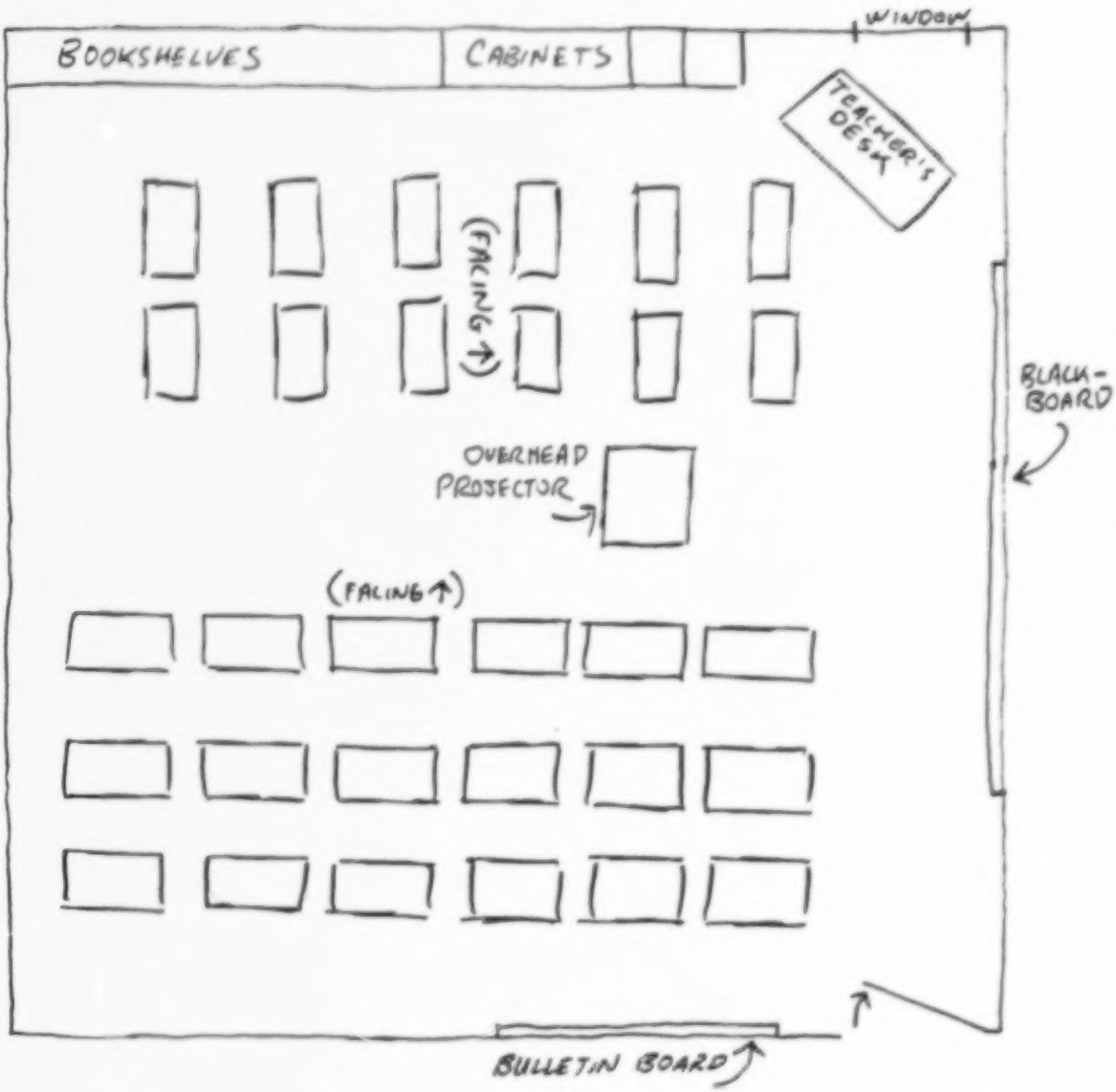

FIGURE 3

filing cabinets, and storage cabinets lined up almost to the front of the room. At the front is the teacher's desk. It has books and papers on it. On the front wall beside the desk are two religious picture/poems. Below these are posted various duty schedules. These are smaller versions of the red scrolls. On the blackboard beside the desk are notations with students' names and an amount of money (borrowed lunch money). There are some small posters and pictures the students had drawn above the blackboard. The major part of the blackboard itself has been erased. It serves as the backdrop for the material on the overhead projector.

The desks near the hall are arranged with their backs toward the wall and facing the center of the room. There are three rows of six desks arranged this way. There are two more rows of six arranged facing the blackboard. Between the two sets of desks is a wider aisle in which the overhead projector is placed when it is used (see diagram).

Overall, the room is attractive and airy. The arrangement allows easy movement of desks into other configurations for group work. The students'

apparel is colorful, but utilitarian. The normal garb is blue jeans and knit shirts. Some of the girls wear dresses occasionally but not every day. The teacher dresses professionally. She is an attractive black lady who uses just the right amount of makeup to set off her sparkling black eyes. The only time during the study she wore jeans was when she had planned an activity outdoors.

Results

There were two purposes of this study. The first was to determine if there is a reaction (by the students) to the participant observer. If so, in what ways and for how long? The second was to determine the types of interactions which occur in the classroom and when these interactions take place.

Most literature that discusses ethnography and its methods and in particular, participant observation, will explain that the data collected the first few days may not be as representative as that collected later. (Bogdan and Biklen, 1982; Dobbert, 1982; and Lincoln and Guba, 1985.) In some studies this may not be important, but in one

dealing with interactions, the data could be crucial. The fact that a "stranger" is present may affect the overall behavior of the respondents. (Bogdan and Biklen, 1982; Dobbert, 1982; and Lincoln and Guba, 1985.) Trust has to be built up between the respondents and the researcher. Trust leads to more credible data, because a subject who trusts the researcher will behave more normally than a subject who does not trust the researcher. Therefore the researcher decided to see how long it would take for the respondents to get used to her and to start acting normal again.

The first visit to the class could have convinced an observer that this was an ideal, or perfect, class. The students came in, sat down, and waited quietly for the teacher to give them directions. The teacher introduced the researcher and had her tell the students why she was there. The teacher then briefly reviewed the students on the previous day's assignment and gave a new one. The students sat there and did their work quietly (except for one young man who just sat there opening and closing his book and playing with a pencil). If a student had a question or wanted to

make a comment about the reading, s/he raised a hand and politely and quietly spoke. The teacher softly criticized the shirking student and requested that he start working. After telling him twice to begin work, she assigned him extra work to do. The teacher walked around the room and helped those who needed it. She managed to speak to each student before the end of the period. She always tried to find something pleasant to say (she did this every time I observed). When she saw that most of the students were through and were sitting quietly, she asked them to open their texts to a certain page and they began to read aloud. There were no student-student interactions during this class period. The only types of interactions were teacher-student interactions initiated by the teacher. When the audio tape was played for this session, there were long periods with no sound.

During the next visit there were a few times when there would be no student-student interaction, but occasionally there were a few murmurs to be heard from some of the girls who finished up their work (they had several pages completed) or from a couple of the boys who decided to quit (they wrote

only two or three lines).

By the third visit, the students seemed to have become accustomed to the observer. They came into the room asking the observer questions. This was also an activity day in which the students were playing a game. They first of all chose teams composed of four students. Each member had cut out pictures of the bones of the skeleton, which were to be put together correctly. A student had to answer a question dealing with the skeletal system to be able to add a bone to the skeleton. The member of the group to finish first was declared the winner (s/he answered the most questions). The groups became quite noisy while playing. They would laugh with excitement at getting to put bones together or groan loudly with dejection at missing the answer to a question. One of the groups was so busy <u>not</u> doing the work and talking loudly, they never got to actually play. Another group did not want to work together, so did not cooperate with each other well. This group was one put together by the teacher, and was the only group in which all the members were not the same sex.

After this visit, the students would act the

way they had before the researcher became a member of the class. They talked, played, and even asked questions of the observer. According to the teacher in an informal interview, they "reverted back to their bad behavior."

When students were asked if their behavior changed in any way during the first few days of observation, they replied:

> "Yes, I behaved a lot different."
>
> "I behaved differently the first few times. I be on my best behavior."
>
> "I was quieter the first few times you were here."
>
> "Yes, I quiet down when I'm around people I'm not used to, but once I'm used to them, I go back to my old self."
>
> "I was more quieter."
>
> "When you was there I was quiet. I'm not as bad. I've been doing my work."
>
> "Yes, I was quieter and I wouldn't mess around and cut up."
>
> "Before you started coming, I talked really bad, every five minutes, but when you came in I kinda calmed down."
>
> "When you came in I started being quiet. I wasn't sure what was going on and I'm a nosy little kid and I like to find out what is going on most of the time..."

A few replied:

"No ma'am, I was just myself."

"Regular."

"I behaved the same. I talked if I felt like it."

When asked about behavior at the end of the observations, many of the answers were "normal" or "back to normal." Other answers were:

"I still try real hard not to talk, but I do anyways."

"My behavior now is horrible. At least that is what Mrs._____ thinks."

"Well, I've begun to know you better and got use to you being around so much. But it don't bother me."

"I act normal because I am used to your being here. I talk more."

"I went back to my old habits."

"It's the same as before you came in there."

"Talkative."

"Back to talking, back to acting up."

"My behavior now is back the same as it was before you came. I make Mrs._____ mad at me every day..."

From these observations, it can be seen that the introduction of a stranger into an already functioning group can change the group dynamics. The change in this case was not permanent and after two visits the students were "back to normal"

according to both themselves and their teacher.

The second objective was to look at types of interactions which occur in the classroom. These are divided into two large categories: teacher-student interactions and student-student interactions. Which types occur and within what context do they occur?

Teacher-student interaction is a process in which each participant influences the other's behaviors. These interactions may cover three general areas; academic, procedural, or disciplinary. The initiation of an interaction can be by either the teacher or the student, although the disciplinary interaction is normally initiated by the teacher in response to students' violations of classroom rules.

The procedural interactions normally were initiated by the teacher at the beginning of class. The day's assignment was on the board. The teacher would then go over it, add details, and answer questions concerning the assignment. Usually the questions would be of a clarifying nature, which the teacher would answer using an even tone of voice. If the question was one to which the answer

was already on the board, the teacher would usually reply, "Read the board" in a higher tone of voice (From audiotape of class). One day several of the young men were not paying attention. After everyone else was working, she told them to start working. They then started asking questions that had already been asked such as "Do we have to copy the questions?" and " What page is the assignment on?" Both of these answers were on the board. In this case, she answer by telling them in a loud stridant tone of voice "If you had been paying attention you would know this. The answer is on the board!" If there was more than one activity, the teacher would decide when to begin this and would then give further directions such as, "open the book to page 142," "copy the scrambled words from the overhead projector, unscramble them and then match the word to its definition." At any time during the class the student was allowed to ask questions concerning how to do the assignment and were usually answered with courtesy and patience.

Academic interactions were sometimes initiated by the teacher and sometimes by the student. They

took the form of questions and/or statements dealing with the material being studied. At the end of the period, or before a test, the teacher would question the students as a review. She would then allow the students to answer or to add to the discussion. While studying the skeletal system, one young lady volunteered a method for distinguishing the tibia and fibula (lower leg bones) from each other: "A fib is a little lie, and the fibula is the little leg bone."

Some disciplinary interactions occurred during the course of this study, most of which were precipitated by the same people. One young man was reprimanded more than once for not having his necessary materials in class and for taking so long to get started on his work. He even asked the observer for paper the first day of observations (he was immediately reprimanded for not having his work). Another young man was assigned punish work (an extra written assignment, usually copying from the text) for throwing "spitballs". When he did not have his work the next day, he was sent to the office. This young man admitted to the researcher that he had even thrown rubber worms in class

before. On a day when the class was going outside to carry out activities about the effect of exercise on heartbeat, a third young man had to be removed from the line and made to walk with the teacher. All he wanted to do was kick people. When given a choice to behave or make an F, he replied, "give me an F. I'm not going to quit kicking." He was not allowed to associate with any of the students for the rest of the period. This same young man was often reprimanded for his aggressive behavior, not only in this class, but in other classes and before school (this information was obtained from an informal interview with the assistant principal and from observation of the researcher).

Girls were disciplined also, but not as often, and not for serious misconduct. Usually, talking softly when they were supposed to be doing classwork was their offense, although one young lady liked to make strange animal sounds sometimes. She would be reminded, "You are not an animal in the zoo." Usually the girls would go back to the expected behavior with just a quiet reminder from the teacher. When asked how they felt when they

had been reprimanded, the students said, "I deserved it," or, "I should have been paying attention." None of the students, including those sent to the office for the more serious offenses, were angry at the teacher. If they had been, they were over it and had forgotten it by the time they talked to the researcher. They seemed to accept responsibility for their actions.

There is one other type of teacher-student interaction that is worth mentioning. It can be classified as personal, not academic, prodedural, or disciplinary. Every day, as the teacher walked around the room observing and helping the students, she would speak to each one of them. She always found at least one positive statement to say to each student. It might be on their appearance, "You sure do look nice today," or it might be on the work they were doing, "That's a really good answer," or "That drawing is very nice." I expect that this is the primary reason that the students felt little animosity when she corrected them. Whether it is classified as interaction or positive feedback and reinforcement, it worked.

Student-student interaction is also a two way

process. Students in the 7th grade have entered, or are entering, puberty and are shifting many of their dependency needs from family to peer groups (White and Spoesnian, 1977). At this stage, most of the students were involved with small unisexual cliques. Most of the interactions which took place were between members of the same sex. On both of the days when the students were allowed to work in groups, they always chose to work with members of the same sex. On both days, there was one group which was heterosexual, but these were teacher-made groups, the children who did not have anyone with whom to work. They were not friendly towards each other. Neither of these groups accomplished their goals. One never got started on the skeleton game and the other one did not participate at all. They just glared at each other.

Girl-girl interactions observed in the classroom consisted of talking together, usually quietly, but occasionally loudly. The topics of conversation were "anything and everything," "classwork," and "boys in the 8th grade." Some boy-boy interactions were similar, but were usually louder. In one case, it involved one young man

chasing another one and then putting his arm around his neck, choking him. The boy doing the choking was the same one involved in the kicking incident mentioned earlier. Boy-girl interactions did not occur as often, but they did occur. Usually, these consisted of quiet talking or a boy picking up a girl's paper or vice versa. One odd incident occurred as a mixed pair came into the room arguing. She said, "lay off me!" Then she said he was, "too big for a head." He replied that her, "head was too big for a body." This incident was over then because the tardy bell rang and they separated to go to their seats.

When do these interactions take place? Do they occur only before the tardy bell or all through the class period? From observations, interviews, and written work the conclusion is that the most interactions occur at the very beginning of the class. The students are coming in from recess and are still excited. It takes two or three minutes after the tardy bell for them to become settled. A few will talk off and on during the rest of the class and toward the end of the period more will talk. When asked when they talked

the most, many of the students said, "only the first few minutes," "until the tardy bell rings." Other responses are:

> "I sometimes talk in class. I talk before the bell and sometimes during the class when I've finished my work."
>
> "I talk all the time."
>
> "My normal behavior in class is terrible. I talk all the time. Argue all the time..."
>
> "Talk all period."
>
> "Talk, at the beginning of the period and at the end. Sometimes in the middle."
>
> "I most talk at the end of the hour."
>
> "I talk off and on all through the period."
>
> "I start talking when it about thirty minutes for the bell to ring."
>
> and, "Sometimes I talk. But I'm pretty quiet. After a while in her class, you begin to talk a little towards the end of class. But hardly no child can keep from talking. ***Fact***." (Emphasis by student.)

Interactions between students occur at all times, at the beginning, middle, and end of class, but every student does not talk at the same time. If this happened there would be utter chaos and no learning would take place. This class is not noisy after they get to work, unless, they have some type of lesson which requires constant interaction.

There are a couple of students who appeared to be social isolates. These seldom initiate contact or respond to the overtures of others, and thus seldom interact with their peers. One of these was a solemn young man a couple of years older than the rest. He came from a foreign country and did not enter school with his age group. He is a serious student who always does his assignment. He was observed locating his pulse in his wrist and neck, then smiling to himself as he read the assignment on the heart. His attitude towards learning and school is excellent and he just does "not want to waste time in class." He is very intelligent and the teacher's reaction to him is, "John knows everything," used as a compliment. He is the "Star" pupil as far as the teacher is concerned. Maybe some day he will be less shy and more outgoing. Another example of an isolate in this class is a young lady. She misses a lot of school. She has a serious medical problem and part of this problem is a body odor. The other students do not want to interact with her, and she does not have any friends in this class. She has a friend she talks to between classes, but this was not

observed. She said she does "not want to talk" with the other students. She usually has "too much work to make up to waste time."

There are three young men who are not liked very well by the rest of the class. These young men try to exert control over the other students. Their agressive style leads to negative responses of the other students and of the teacher. Although by definition, they are not truly isolates, their inappropriate behavior alienates others and they are avoided as much as possible. Two of them were occasionally in the office because of their behavior and were suspended twice during the study. These two hung around each other and formed a small clique.

There are several other cliques operating in this classroom. There was a small group composed of white girls who seemed to do everything together. There was also a group of black girls who were inseparable. One small group of girls was composed of two black girls and two white girls. This group would sometimes team up with either of the other groups. The boys did not seem to stick together as much as the girls did, except for the

two mentioned previously. When given a chance to choose groups, these cliques always chose each other. There were a couple of young ladies that would easily go from one group to another with no animosity like there was sometimes exhibited between two racially different groups.

Discussion

At the beginning I stated that I wanted to find out if the introduction of an observer would have any effect on the class and if so, what type and for how long. The effect that I noticed was the students used their best behavior and/or were inhibited as far as student-student interactions were concerned. This happened for the first two class periods. After that, they went back to their regular behavior. This is consistent with what is found in the literature (Bogdan and Biklen, 1982; Dobbert, 1982; and Lincoln and Guba, 1985). It is also consistent with observations made in my classes when the principal came in to visit and with what other teachers have said about visitors to their classes. A stranger does bring about a different type of behavior.

The other factor being studied is interactions

-- what types and when during the class period they occurred. Teacher-student interactions occurred off and on throughout the class period. At the beginning of class and when a new activity was being introduced, procedural interactions occurred. Directions were given, and questions were answered. Whenever infractions of the rules occurred, the teacher would initiate disciplinary interactions. This might be just a reminder of expected behavior, or an assignment of punishment work, or a referral to the office, depending on the severity of the infraction. Academic interactions, initiated by either the teacher or the student, occurred frequently too. If the students were doing a written assignment, they would generally initiate the interaction to clarify their understanding of the subject. If a class discussion was going on, the teacher would initiate many exchanges, usually be asking a question to find out what the students knew or to stimulate the discussion.

Student-student interactions also occurred at various times and for various reasons. Occasionally these were academic and took the form of asking questions about an assignment or help in

explaining an answer. Usually these exchanges were short and carried out quietly. More often these were of a personal nature. These exchanges were sometimes longer and louder. They took place most often at the beginning and end of the class period. Those at the beginning of the class were louder because the students had just come in from recess and were still excited. At the end of the class verbal exchanges were quieter, as they began to put up their books and get ready to change classes.

In reviewing my observations and results, I realize that other things could have been done to make the data more accurate. I could have kept track, using my watch, of exactly what time every interaction occurred. I could have moved around more and been able to record the conversations that took place in most of the student-student interactions. Since most of the teacher-student interactions were carried out in normal talking volumes, most of them were noted, but the personal conversations were not as loud and were not picked up on the audio tape. The only way I was able to find out about the topics discussed was to ask the students.

The information in this paper was obtained by using the qualitative research method. A participant-observer took part in watching class. Audiotaping was done of each class session. Written responses from the students were taken, read, and classified. The students were interviewed. Member checks were done by both the teacher and students. Triangulation was accomplished by using these different methods and concurrence between the methods occurred.

Conclusion

Did the introduction of a researcher into the classroom cause a change in the actions of the students? The answer is yes. During the first two visits the students did not speak unless spoken to or unless they had a specific question. During subsequent visits, they interacted with each other whenever they wanted to. It did not matter whether the observer was there or not. The students had become accustomed to her face and she was part of the group.

Interactions between the teacher and students, and between the students only, occurred daily. In the teacher-student interactions, most were

initiated by the teacher. Most of the student-student interactions were between members of the same sex. Also, most of these interactions were friendly, although a few were not. When did interactions take place? Most occurred at the beginning of class and/or at the end of class, with some taking place between these times too. Teacher-student interactions of the procedural type occurred mostly at the beginning of class ("Open your books to page ?18, and answer the questions."). Academic teacher-student interactions either initiated by the teacher or the student occurred at various times during each period ("Mrs._____, I can only find three functions of the skeleton. Can you help me find the other two?"). Disciplinary actions were carried out whenever necessary due to a student breaking the rules ("J___, stop kicking everyone and sit down.").

Interactions between students also were carried out at different times during the class. Academic interactions normally occurred during the middle of class ("What answer did you get for number three?"). Personal interactions normally

occurred at the beginning and the end of class ("What do you think about the tacky dress she has on?"). From this it can be seen that many types of interactions occurred at various times during the class period.

Personal Reflections

This study was extremely time-consuming. The data collection itself was done at school from 12:00 to 1:00 p.m. over a six week period. After five observations I began to interview the students. They all volunteered. The first five interviews were done with individuals. After that, I started talking with them two at a time. This turned out to be a little faster, but took longer to transcribe. Finally, I decided to also give out a short open-ended questionaire in which the students would describe his or her behavior. Member checks were carried out at the end of each interview. The teacher read over my observation notes and the student written work and agreed that they were accurate. The data from the different methods of collection concurred, so the results have been triangulated.

My biggest problems in the collection of the

data, were (1) getting the students to speak up and not mumble during the interview and (2) getting the observations typed so the teacher could look over them.

The hardest part of the project took place after all my data had been collected. This was coding, analyzing, and putting the paper together. I feel like I needed even more time than I took.

If I had to do this again, I would like to start at the beginning of a semester, not towards the end of it. More time to collect the data might make the research richer. The use of a team to collect data would also facilitate matters.

There are many other aspects to be explored. I would like to look at how a student's attitude about school affects his/her behavior; to determine if the teacher's attitude affects the behavior of the students; and to see if the student's attitude toward the teacher affects his/her behavior in class. This could then be expanded to cover other teachers also. Overall, there are many possible angles which could be explored, but not by a single researcher in a short period of time.

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